# SCAG Arterial Speed Study Phase 2

Work Plan & Progress Review



## **Objectives**

- Improve modeling of volume/delay
- Build on work from Phase 1
- Collect new arterial data
- Incorporate ATSAC data where available
- Develop and test new volume/delay functions



## Responsibilities

#### SCAG

- Project oversight
- Data from network inventory & model
- Liaison with local agencies
- Model validation runs

#### Dowling

- Sampling plan
- Data collection
- Model development
- Model implementation
- Training



#### **Tasks**

- 1. Survey plan
- 2. Speed surveys
- 3. Data analysis
- 4. ATSAC speed data
- 5. Arterial VDF
- 6. Freeway VDF

- 7. Model validation
- 8. Truck speeds
- 9. Final report
- 10. Training
- 11. Meetings



# Task 1. Arterial speed survey plan (1)

- Add to Phase 1 data
- Proportional sampling of arterials
- Identify sites outside City of LA
- Specify:
  - Quality control measures
  - Safety measures
  - Survey standards



# Task 1. Arterial speed survey plan (2)

- 24 sites selected
- < 2 mi long; 1 RT every 15 min</p>
- Sites distributed in proportion to VMT

```
Imperial1Los Angeles6Orange5Riverside4San Bernardino4Ventura4
```



# Task 2. Arterial speed surveys (1)

- 24 arterial sites: street segment between 2 signals
- Hourly machine counts for 24 hrs.
- Floating car runs from 2 PM 6 PM
- GPS units on cars
- Daily quality control checks on data



# Task 2. Arterial speed surveys (2)

- Surveys conducted 29 April 14 May
- Traffic count data received from Wiltec
- Speed data received from Jacobs-Carter-Burgess



# Task 3. Data summary & analysis (1)

- Enter data into database
  - Speed data (Task 2)
  - ATSAC data (Task 4)
  - PeMS data (Task 6)
- Summarize data by attributes:
  - Facility type
  - Area type
  - County



# Task 3. Data summary & analysis (2)

- Data format tech memo sent to SCAG
- Developing database that can be converted into other formats



## Task 4. ATSAC speed data

- Speed and count data from ATSAC (LA)
- Incorporate into database



### Task 5. Revise arterial VDF

- Review & evaluate other VDFs completed
- Review current SCAG network
- Develop updated VDFs
- Implement VDFs in TransCAD
- Evaluate results of SCAG model runs



# Task 6. Revise freeway VDF (1)

- Collect PeMS data
- Filter out bad data
- Develop updated VDFs
- Implement VDFs in TransCAD
- Evaluate results of SCAG model runs



# Task 6. Revise freeway VDF (2)

- PeMS data collected
  - April September 2007
  - Screened out data with < 75% observed</li>
  - 1,918 mainline stations
  - 3.8 million hourly speed & flow observations from
- Data aggregated into 4 SCAG time periods
- 150,000 160,000 observations/period



### Task 7. Model validation

- Review validation criteria
- Evaluate results of SCAG model runs
- Fine-tune VDFs
- Model validation runs to be done by SCAG after implementation of new network



# Task 8. Truck speeds post-processor

- Ensure truck speeds consistent with results of new VDFs
- Review data from CARB and PeMS truck travel time data sets
- Recommend possible improvements



# Task 9. Final report, acceptance test

- Final report
  - Study method
  - Data collection
  - Model results
- Prepare research paper with SCAG



## Task 10. Training

- Train SCAG & other agency staff
  - ATSAC data retrieval & extraction
  - Other intersection monitoring devices
- Technical memorandum
- Teleconference with SCAG/agency staff



# Task 11. Meetings, progress reports

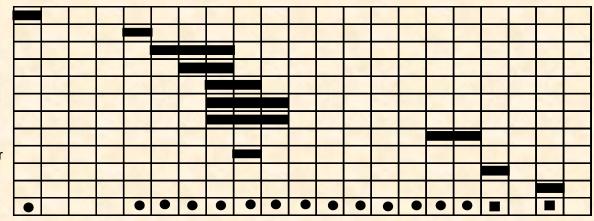
- Review work program (completed)
- Revised work plan (completed)
- Meetings with TRC
- Presentations to SCAG MTF
- Monthly progress reports



## Project schedule

#### Task

- 0 Proj mgmt/work plan
- 1 Speed survey plan
- 2 Speed surveys
- 3 Survey data analysis
- 4 ATSAC speed data
- 5 Revise arterial VDF
- 6 Revise freeway VDF
- 7 Model validation
- 8 Truck speeds processor
- 9 Final report
- 10 Training
- 11 PM, TRC, MTF meets



Oct 07
Nov 07
Jan 08
Apr 08
Aug 08
Sep 08
Oct 08
Nov 08
Beb 09
Apr 09
Apr 09
Apr 09
Aug 09

- = telecon
- = meeting

